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The Hastings Popular Lecture
ON
DIET AND HEALTH

Delivered in the Great Hall of the British Medical Association on March 13th

BY

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This lectureship—the fourth since its institution—was founded by the British Medical Association to celebrate the life and work of Sir Charles Hastings, the founder of the Association in 1832. History has taken, and will continue to take, good care of the memory of Sir Charles Hastings. Much has been written of his greatness and of his activities, so that there remains but little for me to add by way of panegyric, at least as regards his work for the medical profession. As one who has spent much of his life in experimental science, I must, however, take this opportunity of saying that Sir Charles Hastings was a man after my own heart. In his earlier years, at least, and before he was weighed down with practice and public work, he was first and foremost a physiologist with a perfect understanding of the meaning of the experimental method. It would delight the heart of anyone engaged in experimental medicine to read his account of "An experimental inquiry respecting the contractile power of the blood vessels," published in 1820, and to note the way in which he mixes up experiment and clinical observation, a method which those of us who are interested in medical investigation hope to see much more commonly practised. It is thus easy to understand why the introductory words of the first three proposals in the prospectus of this Association drawn up by him were: "collection of useful information," "increase of knowledge," and "investigation of diseases."

It seems to me fitting before beginning this lecture that I should also refer to the greatly lamented decease of my predecessor as Hastings lecturer, Sir Andrew Balfour. A year ago Sir Andrew Balfour lectured on the subject which reflected his life's work and interests—namely, "Health and Empire." Balfour was of the salt of the earth, capable and efficient in all he undertook, whether it was playing football for Scotland or administering in unhealthy tropical lands, or building up and directing the London School of Hygiene. With these qualities of distinction he was generous and open-hearted in all he did. Hastings and Balfour had much in common, and it is curious to note that just as Hastings, two years before he died, finished off a lecture with these words: "England, may thou be destined to spread a knowledge of Sanitary Science over the globe: to set an example to other people of obedience to physical laws laid down by the Almighty: and, in the words of Milton's magnificent poem, 'to lead the nations in the way of life,'" so also one of Balfour's last duties was to deliver his lecture on "Health and Empire."

Now the Hastings lecturer is instructed to make some popular pronouncement on matters concerning health, and the subject I have chosen is one which I have been engaged in investigating for many years—namely, "Diet and health." It is obvious that such a subject is intrinsically bound up with diet and disease, and any investigator who confined himself merely to one side of the picture would resemble a cashier who could only recognize one side of a shilling. I must therefore continually refer to disease, although I shall try to confine myself largely to illnesses which are familiar—generally only too familiar—to everyone.

The subject of diet and its relation to health is of recent development, and is a product of the present century. It is true that people have always talked about "good" food in the sense that such was compatible with the best health, but each person had his own idea as to what foods were "good." It is not surprising that while the subject was one of observational interest only there were no generally accepted views that diet and health were intimately related. It was obvious to anyone interested in the subject that the Eskimo's diet consisted largely of meat, fish, and blubber, while the native of the Tropics ate a maize and mealie diet, and yet both seemed compatible with health. What could there be in common between these diets? Although we have some knowledge to-day as to why these very varied diets may be compatible with good health, it is easy to understand that their very diversity would suggest that the problem of diet and health was non-existent.

It may be argued that although the people are only now taking an interest in the science of food, their concern before being merely the aesthetic aspect, yet doctors have

long considered the subject of importance. It is indeed true that medical men throughout the ages have recommended special diets in times of illness and convalescence, but they did not recommend foods such as milk, custard, white meat, meat extract, etc., because they thought these foods had any inherent specific curative properties, but because they were easily digested and usually pleasant to a jaded palate. Besides, the view now is to feed so as to prevent illness.

OBSERVATIONAL INVESTIGATIONS

It is of interest to note, however, that occasionally descriptions of observational work have been published which can now be recognized as having suggested the importance of the *quality* of diet in the maintenance of health. Sometimes even a relationship between a dietetic characteristic and a specific abnormality or disease has been shown in this way. The classical example is scurvy, the incidence of which could always be controlled by wise men like Captain Cook. The history of scurvy illustrates well the difference between an observed fact and a fact established by experiment. In the first case only wise and observant people make use of the information; in the second the subject is, or ought to be, foolproof. There was some excuse a hundred years ago for naval authorities when they assumed that lime juice is as good an antiscorbutic as lemon juice. There is no excuse now, because we know by experiment that this is not the case.

I should like to refer to two other instances of observational investigation which have always impressed me, though, as is usual in work of this type, their publication did not attract attention, and their significance was missed, until the subject became a scientific study.

The first of these accounts concerns an investigation described by Dr. William Hall at Leeds in 1902. In examining school children at Leeds, Dr. Hall was much interested in the great difference in general appearance, and more especially in the teeth, of Jewish and Gentile children, the financial position and housing of whose families were comparable. The results of his investigation are thus classified.

	Rickets. Per cent.	Bad or backward teeth. Per cent.
Good district Gentile school	8	38
Good district Jewish school	5	11
Poor district Gentile school	50	60
Poor district Jewish school	7	25
Country school (Ripon Cathedral School)	11	33

The great difference between these two classes of people, more especially in the poor schools, is very striking. It will be further observed that the condition of the poorest Jewish children is better than that of the country children.

Hall then proceeded to investigate the cause of the above-described differences, and finally decided that only the dieting could be held responsible. From his analysis of the diets, which he found very different in the two classes of the community examined, I take the following points: (1) The Jewish families used large quantities of oil in cooking, even in making bread. Fish were generally fried in oil. Potatoes were not boiled in water. If boiled it was usually in milk; otherwise they were cooked in oil. In making broth, butter and oil were added to it. (2) The normal beverage was cocoa made with milk. This was usually drunk three times a day, except on the days when meat was eaten. (3) On analysis it was found that the Jewish families consumed large numbers of eggs. (4) Fruit and vegetables were used abundantly. (5) The Jewish mothers combined to buy large quantities of the cheaper fish in the market. Herrings were commonly eaten.

Dr. Hall's conclusions as to the inferior physique of the Gentile families were: (1) that it did not depend on heredity or on city life; (2) that it was purely dietetic. If Dr. Hall had lived to see the recent development of nutritional science it would have pleased him to realize how truly he had hit the nail on the head.

The second observational investigation to which I wish to refer is that published in the Carnegie Report on the Physical Welfare of Mothers and Children in Scotland, and concerns the inhabitants of the Island of Lewis in the Hebrides. Many of the inhabitants of these islands live in what are called "black houses." These are constructed of turf and stones, and have a thatched roof. There is often no chimney to the house, and, since the peat fires are kept constantly burning, and there is no exit for smoke except through the door, the condition of the atmosphere of the house can be well imagined. The walls are often as much as five feet thick. Cattle frequently live under the same roof, the byre adjoining the house, and it is sometimes necessary to pass through the byre to enter or leave the building. Chickens have full run of the house and go on to the beds, tables, and dressers. Altogether, the hygienic conditions are dreadful. What about the children? The statements are made in the report: "The children are not taken out until they can walk"; "never taken out until they can walk, except possibly for a few minutes on a fine day in the summer time." It is quite clear, therefore, that if bad hygienic conditions and lack of exercise are responsible for rickets and ill-health, then the infants of Lewis ought to succumb at a great rate. What are the facts? The main fact is that the death rate of these infants under 1 year is about the lowest in the British Isles, even compared with the present rate, and has occasionally fallen to as low a figure as 40 per 1,000. This death rate compared very favourably with the infantile mortality of 100 to 300 per 1,000 usually found in the towns of this country at that time, in spite of the efforts made to improve the general hygiene. It is remarked that rickets is almost unknown in the island, and "the most striking fact in the adult population is their beautiful teeth—a testimony to the absence of rickets in infancy."

If we now examine the diet of these people we find results in close agreement with present expectations and knowledge. In the first place, practically all the children are breast-fed. Again, an analysis of the foods eaten shows that the staple articles of diet are fish, oatmeal, and eggs. It is true that milk is scarce, except in summer, but against this we have breast-feeding, affording the opportunity to children to get milk at the most important period of their lives. As regards fish, we find that the liver of fish—that is, the best source of the antirachitic and anti-infective accessory factors—is regarded as the favourite dish. It is described as being mixed with oatmeal and milk and cooked in cod's head. It is almost certain that the breast-feeding of the children, together with the high content of fat-soluble vitamins of the adult diet, are responsible for the absence of rickets, the formation of beautiful teeth, and the very low infant mortality found in these islands, and that this is the case in spite of the dreadful hygienic condition of many of the houses.

These, then, are two investigations in which the observations made led to the conclusions, first, that in early life diet is of paramount importance, exceeding in this respect general hygiene, and, secondly, that certain foods are responsible for the nutritional excellence.

THE EXPERIMENTAL METHOD

In spite of these spots which brighten up a dull vista, it is to be greatly doubted whether the method of general observation, such as the determination of relative health and disease in an area, and the correlation of the food eaten with this, would have led to any great advance. What, then, was responsible for the change in method which has been so fruitful? The answer is simple—the

animal experimental method. The person more responsible than anybody for the change was Eijkman, a prison doctor in Java. If Eijkman had been an ordinary man—even had he been sufficiently observant to notice that his hens developed the same symptoms of polyneuritis as his prisoners—he would have regarded the matter as interesting and left it there. Eijkman, however, was not an ordinary man, but recognized at once that he now had the means of really discovering what was the cause of beri-beri. He soon found that the hens developed the same disease as the prisoners because they both lived on the same diet, consisting largely of polished rice. When the polishings were added, the disease did not develop, or was cured. This work was continued by his successor, Grijns, and others, and led to the discovery of vitamin B_1, now known as the antineuritic vitamin. The value of the experimental method in this form of dietetics was now proved, and with the breaking of the ice the same road of discovery was open to others.

The susceptibility of guinea-pigs to scurvy was shortly afterwards used by Holst and Fröhlich as a means of investigating the cause of scurvy, and led to the discovery of the antiscorbutic vitamin. Now both beri-beri and scurvy, although diseases of great importance in certain places and at certain times, are of but little interest to us, since they are so rare in this country. Occasionally I see cases of scurvy, generally among working men living in lodging houses and eating a diet of bread and tinned meat, but these are rare. I shall not therefore spend time in discussing these diseases, but turn to the consideration of some of the diseases influenced by diet and affecting inhabitants of this country.

In order to focus my remarks, which obviously must be very brief in relation to each problem, I shall take as my general thesis the statement that it is more important that the diet should be perfect in its qualitative character in the earlier periods of life of the individual than at a later age. The reason for this will be obvious when I remind you that it is during early life that growth of tissues takes place, that form and formation of tissues are related, that dietetic factors control in a specific way the structure of developing tissues, and thus the absence of any of these specific factors from the diet at this period brings about the malformation and therefore an abnormal physiological—that is to say, a pathological—condition of the developing tissues. In the adult, when the tissues are fully formed, the same dietetic defects, although they may result in ill-health, cannot obviously be as important as in the infant and adolescent.

Importance of a Complete Diet in Early Life

Necessity of Sufficient Vitamin D for the Formation of Teeth and Bones

Bones and milk teeth begin to be formed long before the infant is born, and their proper structure in the early stages depends on a sufficient supply of the necessary chemical substances from the mother. Both these tissues are composed largely of calcium phosphate, but however much calcium and phosphorus is available the bones and teeth are imperfectly formed unless there is an adequate supply of vitamin D (the antirachitic or calcifying vitamin). Vitamin D can be obtained by the mother either in her food from such substances as egg yolk, milk, cheese, and cod-liver oil, or, if she lives in the Tropics and goes about naked, the sunshine striking her skin will activate a chemical substance, ergosterol, there present and produce vitamin D. If, as is usually the case in this country, the mother's diet during pregnancy is deficient in vitamin D, and there is little or no chance of exposure of her skin to sunshine, the milk teeth will be defectively formed and will therefore be more susceptible to decay in later years.

After birth the infant's teeth and bones continue to calcify, and must still be supplied with abundant vitamin D as well as calcium and phosphorus. A good supply of calcium and phosphorus and some vitamin D, but usually not enough, is provided by milk. When the child is wholly breast-fed for eight or nine months the milk teeth get a good chance of being well formed, provided the later diet is suitable. If, as often happens, breast-feeding stops after about two or three months, and the child is given cereal products as well as milk, the teeth will almost certainly be badly formed, for cereals are not only lacking in vitamin D but contain something which interferes with the calcification processes. If cereal is given in the early months of life, the child must receive much more vitamin D, either in the form of cod-liver oil or irradiated ergosterol, if calcification is to be good. It is, in fact, advisable even in the completely breast-fed infant to give some cod-liver oil—say a teaspoonful daily—to ensure perfect calcification of the bones and teeth.

The permanent teeth of a child begin to calcify at birth, and the process continues up to the eighteenth year. Throughout all this time the diet ought to be rich in vitamin D and calcium. Usually it is very deficient in these respects, especially when the child begins "to eat with the family." No child or adolescent ought to eat the same diet as adults, for the bones and teeth of the latter are formed and fully grown, and therefore there is not the same demand for these substances. For proper teeth formation milk ought to form a significant part of the diet, and cereals, which constitute the bulk of the average diet, ought to be kept as low as the economic condition will allow.

It can be accepted as an axiom that the earlier the age the greater is the importance of carrying out the above instruction. The better the "kick off" the easier and better will the processes of formation continue.

Necessity of Vitamin A for the Subsequent Prevention of Pyorrhoea Alveolaris

Just as vitamin D holds the key to the formation of the teeth and bones, so vitamin A controls the structure of some epithelial tissues, and, in regard to the present subject, especially that part of the gingival epithelium adjacent to the teeth. If puppies are given a diet deficient in vitamin A during the early months of life this epithelial tissue, instead of being thin and even in structure, shows signs of overgrowth and becomes hyperplastic, sending off processes of cells into the underlying soft tissue. When the epithelium is badly formed owing to this early deficiency in the food, the animal is very liable to develop pyorrhoea alveolaris, even if its diet is subsequently greatly improved. If, on the other hand, this tissue is perfectly formed as the result of a liberal supply of vitamin A in the early diet, it is a matter of difficulty to produce pyorrhoea alveolaris in later life, even if the diet becomes defective. In other words, to make sure of escaping pyorrhoea in later life the diet must be perfect in its vitamin A content during the period of development.

Usually when the child's diet is deficient in vitamin A it is also deficient in vitamin D, and in these circumstances the teeth, the jaw bones, and the epithelium will all be badly formed, and there will therefore be a tendency for both caries and pyorrhoea to develop later, although not necessarily at the same period of life. Sometimes the teeth are well formed and remain free from decay while the surrounding tissues are affected by pyorrhoea. This suggests that a diet containing plenty of vitamin D but a deficiency of vitamin A was consumed during the period of development. Both caries and pyorrhoea are very common dental diseases in this country.

Here, then, is another case in which, if health of the tissues is to be maintained in later life, the diet must not be deficient in a specific factor during early life, otherwise widespread disability results—another example, in fact, of "the sins of the infant being visited on the adult."

Necessity of Iodine in Early Life

It is generally recognized that simple goitre is the outcome of iodine deficiency, but there are a few points about this relationship which do not seem to be widely known, and these facts will probably make the subject more easily assailable than hitherto. They also give support to the view I am now advocating—namely, the importance of a proper diet in early life.

To my mind the essential point about the relation of iodine to goitre is the much greater demand for thyroid secretion (rich in iodine) during early life and growth than in later life. If, therefore, iodine is withheld from the diet of a mother during pregnancy, she cannot satisfy the demands of the developing foetus. The result is that the thyroid of the embryo and animal after birth tends to become a goitrous enlargement, and is hyperplastic. It is easy to produce enlarged thyroids in young dogs by withholding iodine from the mother during pregnancy and lactation. Since fish and fish products contain most of the iodine in the normal diet, all that is necessary in feeding the pregnant animal is to give ordinary foods such as milk, butter, eggs, bread, etc., and to prevent it roaming about and getting additional nutriment in its own way. If a similar diet be given to the offspring, with the increased growth of the animal the thyroid enlarges greatly until a real goitre is produced. If iodine or cod-liver oil be given to these young animals, the gland is rapidly transformed back to normal and the swelling in the neck disappears.

Whereas in a young child the thyroid enlargement is often of the parenchymatous type, the adult simple goitre is a gland made up of enlarged vesicles full of colloid, and is generally unaffected by iodine. For some years I have been interested in this problem, and have succeeded in reproducing the conditions in dogs which seem comparable to the goitres in man. The production of parenchymatous goitres in young dogs depends, as stated above, on keeping the iodine content of the diet of the mother during pregnancy, and later of the puppy itself, as low as possible. If a very small daily dose of about 0.00001 gram of potassium iodide is given to an adult dog (for instance, at the age of 1 year) with enlarged parenchymatous goitre, the gland does not return to normal, but is slowly converted from a parenchymatous to a colloid type of goitre. The change may be associated with a further enlargement of the gland. Thus we see that the goitrous condition so common in some countries, and even in parts of this country, is not so much a problem of lack of iodine in the diet, but rather the lack of iodine in the diet in the early stages of life—that is, during pregnancy, lactation, and time of vigorous growth of the young. Since fish and cod-liver oil are by far the best sources of iodine in food, either or both ought to be included in the diet of the pregnant mother and the growing child.

TREATMENT OF DISEASE BY DIET

I have so far described ways of preventing ill-health, taking as examples three very common pathological conditions in which defective feeding in early life plays an important part by bringing about malformation of tissues. It might be asked whether anything can be done in later life to overcome these defects. Is it possible, in fact, to influence dental caries, pyorrhoea alveolaris, and simple goitre by diet after they have once developed?

Dental Caries in Children.

The use of the experimental method has completely revolutionized our knowledge of the fundamental cause and treatment (prophylactic and curative) of dental caries. Once teeth are badly formed it is impossible to remake them into perfect structure. Since they are living organs it is possible, however, to alter their susceptibility to dental caries, and even in many cases to stop the process of decay. If a child of 4 or 5 years with decayed teeth be given a diet rich in vitamin D, milk and other calcifying foods, the resistance of the decaying teeth is greatly increased, and the carious process may be stopped. This fact was clearly shown in an investigation in Sheffield by May Mellanby and C. Lee Pattison, and described in publications in 1924, 1926, and 1928. Recently the inquiry has been repeated on a larger scale in an institution in Birmingham, and the results obtained in the Sheffield investigation have been corroborated. When cod-liver oil or vitamin D was added to the diet the spread of caries was greatly reduced. The basal diets used in the Birmingham investigation were the ordinary diets of institutions supported by public funds, and, although better than the diet of the average child, they contained, as do all diets in this country, much bread and other cereal. Now it has been stated before that cereals interfere with tooth and bone calcification, and it is therefore a matter of interest to know whether dental caries will heal up more rapidly, and whether its extension will be more completely delayed, if, in addition to extra vitamin D in the food, cereals such as bread are removed. The answer to this question was suggested recently from a most unexpected quarter. It was found by Boyd and Drain that dental caries in twenty-eight diabetic children living on a diet devoid of cereals, and containing cod-liver oil, healed up, and all spread of caries ceased. They tested the same diet on thirteen normal children, and in each case they state that decayed teeth hardened up and the extension of caries ceased. It is clear that this is a confirmation of the Sheffield work published some years previously, and the only problem to be settled is whether the cure and prevention of caries on a cereal-free diet containing extra vitamin D is any better than that on a cereal-containing diet with abundant vitamin D. May Mellanby and C. Lee Pattison recently placed some children on the following diet, and watched the carious processes of the teeth over a period of six or more months (unpublished).

Foods in diet (cereal-free and containing extra vitamin D) given to children with dental caries:

Eggs, meat, bacon, milk, cream, dripping, potatoes, carrots, turnips, cabbage, fruit salad, rhubarb, prunes, cocoa, and cod-liver oil.

A typical day's diet for a child of 9 is as follows:

Breakfast.—Omelette (one egg), mince 3 oz., cocoa—that is, milk 1/2 pint.

Lunch.—Milk 1/2 pint.

Dinner.—Potatoes 3 oz., meat slices 3 oz., carrots 2½ oz., milk 1/2 pint.

Supper.—Potatoes fried in dripping (3 oz. potatoes, 1½ oz. dripping), milk 1/2 pint.

The results obtained up to the present suggest that this type of diet gives even better results than the institutional diet with added vitamin D, so that it appears now possible to control to a very large extent dental caries in children by diets of this type. It may be added that these children have either moderately or very badly formed teeth in the first place, so that the effect of the diet in curing the caries is independent of their original structure.

The question will be asked: Is such a diet (cereal-free and rich in vitamin D) a practical proposition? It certainly can be eaten for a long period of time, but it is costly and impracticable for poor people. It may prove

possible, by increasing the dose of vitamin D and calcium, to retain cereals in the diet and get as good results as by limiting the cereal of the diet. Obviously, however, the best method is to produce perfectly formed teeth by proper feeding of the maternal organism and the young infant and child. Here again the cereal factor of the diet interferes with the development of a healthy set of teeth, for it is usually large both in the diet of the pregnant and lactating woman and of the infant when it is separately fed. The necessity of tackling the whole problem of dental disease from the period of early development of the tissues, on the basis of this new knowledge of nutrition, is very urgent when we consider the following facts. About 60 per cent. of the 5-year-old children at the London County Council schools were recently found to have extensive caries, and even at that young age only 5 per cent. were free from the disease as judged by examination with a probe and mirror. Yet there is no reason to believe that the teeth of these children are any worse than those of the average child of this class in the British Isles.

Pyorrhoea Alveolaris

It is too early yet to make any pronouncement on the question of curing this disease by diet when it has once developed. It does not seem likely from the animal experiments that the great success described above in the dietetic treatment of dental caries will result in the treatment of this very prevalent disease. In preliminary experiments on this point May Mellanby has obtained a retardation and alleviation of pyorrhoea in dogs by feeding them on diets very rich in vitamins A and D. The large amount of damage done by infective organisms to the already malformed periodontal tissues seems to preclude a perfect cure, and the most that can be attained from proper dieting is probably the delay in the progress of the disease. As previously stated, if a suitable diet is given in early life, and the tissues are healthy to begin with, the disease is not likely to occur in later life.

Simple Goitre

If goitre in young children of, say, 5 or 6 years is treated with iodine, either as such or in the form of potassium iodide, the swelling usually goes down rapidly in the course of a few months. If patients of 17 years or older with goitres are similarly treated, generally nothing happens, and the best means of getting rid of the swelling in the neck is by surgery. I am, of course, referring to goitres without hyperthyroidism. Now, what is the difference between these goitres of young children, which respond to iodine, and those of adults, which resist this treatment? The difference is that the goitre in young people is parenchymatous, contains little or no colloid, and is readily converted back to the normal gland by iodine therapy. In the adult, however, the gland has been gradually transformed to the colloid type, containing large vesicles full of colloid. This gradual transformation apparently depends on (1) the presence of small traces of iodine in ordinary foods, and (2) the diminution in demand of thyroid secretion with age. At this time extra iodine does not bring about reversion of the gland to normal. Thus we see once more how essential it is for a healthy existence that iodine-containing foods should be included in the diet during pregnancy and early life, and so prevent simple goitre.

Influence of Diet on the Resistance of the Body to Bacterial Infection

I wish now to allude as briefly as possible to an aspect of dietetics which has been investigated by the experimental method in the last two or three years—namely, the relation of diet, and especially vitamin A, to infection.

The experimental results with animals are so clear that it might be expected that the clinical extension to man would also be easy to understand or deduce. This, however, is not the case as yet—a state of affairs which those of us who are working on the subject find extremely difficult to comprehend. While, on the one hand, it seems certain that the effect of diet on resistance to infection is fundamental, and sufficiently important to open up the whole subject of immunity from a new angle, it is impossible as yet to define the actions and the limitations of vitamin A as an anti-infective agent. The experimental facts can be described in a few words. If young rats are placed on diets complete, so far as we know, except for vitamin A, they all die within a few months with multiple infective lesions affecting different parts of the body, most commonly the eyes, the ears, lungs, the nasal sinuses, and the genito-urinary tract, but abscesses may be found almost anywhere. If a small quantity of vitamin A be given, cure follows rapidly if infection has not proceeded too far. Carotene—a pigment in carrots and green vegetables—acts in the same way as vitamin A, and it appears that physiologically, but not chemically, these substances are identical. Carotene is, in fact, the form in which vitamin A occurs in vegetable life, and is probably the precursor of vitamin A as found in animal life.

The infective lesions associated with vitamin A deficiency have the characteristics (1) that they apparently begin in mucous membrane and epithelium, and (2) that they are of a subacute or chronic type. Before taking a general survey of diseases of infection with a view to trying to see those in which vitamin A deficiency plays a part, I shall mention some of the conditions in which this substance has been tested clinically or as a therapeutic agent, in no case, however, on a scale sufficiently large to allow certain deductions to be made.

My colleague Green and I have treated cases of puerperal septicaemia with diets rich in protective substances, and especially rich in vitamins A and D. The results so far obtained in nineteen cases are promising, but not conclusive, the mortality being about 28 per cent., as compared with a usual mortality rate of 80 per cent. We have also tested the value of vitamin A as a prophylactic agent in puerperal sepsis, alternate women at an antenatal clinic in Sheffield being given radiostoleum, a preparation rich in vitamins A and D. Up to the present only about 200 of vitamin A treated women and 200 control cases have been tabulated, but the results are definitely more favourable in the vitamin A cases. A preliminary description of these investigations was mentioned in the *Proceedings* of the Public Health Congress of 1930, and will be published shortly. On the basis of the animal experiments favourable results would be expected to ensue from vitamin A therapy in puerperal sepsis, since the disease is an infection of a mucous membrane, and is therefore more comparable with the animal experiments than that of puerperal septicaemia.

Vitamin A as a therapeutic agent has also been tested by Donaldson at the Crown Gold Mines in Johannesburg. He gave vitamin A either in the form of radiostoleum or mammalian liver to 200 cases of pneumonia and used 100 cases as controls. The mortality rate among the control cases was 13 per cent., and that of the vitamin A treated cases 8 per cent. It appears as if the vitamin A therapy had been to some extent effective, but the results are not dramatic.

On the basis of our experimental work extensive clinical trials on the prophylactic effect of vitamin A on such infections as the common cold, sore throat, etc., are now being made by the Medical Research Council. My own experience suggests that diet will not prevent the common cold completely, but that it will reduce the incidence of the infection and shorten the period of convalescence by limiting the spread of bacterial infection down the bronchi and so reducing or eliminating the coughing stage.

It is clear that vitamin A as a therapeutic agent in acute infective conditions like pneumonia is limited in its effect. As a prophylactic agent against infection, and especially against chronic infection, it seems to me probable that it will be much more effective. Certainly animals on a vitamin A deficient diet develop broncho-pneumonia much more readily than those receiving this substance in abundance. On the other hand, I have seen a child develop a very severe throat infection, followed by acute middle-ear disease, when taking a diet containing a fair amount of vitamin A.

From another point of view it seems to me possible to get some suggestive evidence that diet defect is related to certain types of infection. If, for instance, we survey the incidence of disease among different classes of people we can get some ideas on this subject, for the average diet of the poor differs from that of the well-to-do in the following respects. The poorest people, as represented by the unemployed and unskilled labourers, (1) eat less food than the well-to-do, (2) eat a diet containing a relatively greater amount of cereal, (3) eat a diet containing less of the " protective " foods, such as milk, eggs, and green and other vegetables. Thus, if the animal experiments on diet have any meaning in terms of human disease, the incidence of some infective diseases ought to be much greater among the poor. This is indeed the case. Chronic middle-ear disease, phthisis, lupus, and acute rheumatic fever are diseases which are much commoner among poor people than among the well-to-do. An idea of the incidence of disease can in some cases be obtained by examining the death rates published by the Registrar-General in his decennial report. Let us first look at the statistics concerning tuberculosis of the lungs and bronchitis as a cause of death in different classes. The following figures are those of the Registrar-General, and represent the standardized mortality (C.M.F.) of the five social classes of males at ages of 20 to 65 for 1921 to 1923.

	Social Class				
	I	II	III	IV	V
Respiratory tuberculosis	80.0	138.0	159.8	164.2	229.0
Bronchitis	12.7	27.2	46.5	59.4	87.4

The differences in the relative mortality in these groups are very great, and further examination reveals that these differences are found at all stages in life, as can be seen by the following diagram reproduced from the Registrar-General's decennial report.

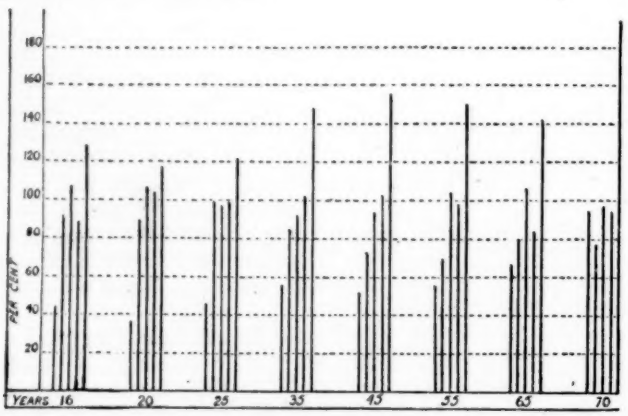

DIAGRAM I.—Social distribution of mortality due to respiratory tuberculosis. Mortality of each social class per cent. of that of all occupied and retired males at different ages. From left to right the social grade represented by the respective lines (I to V) are: upper and middle class, intermediate, skilled workers, intermediate, unskilled workers.

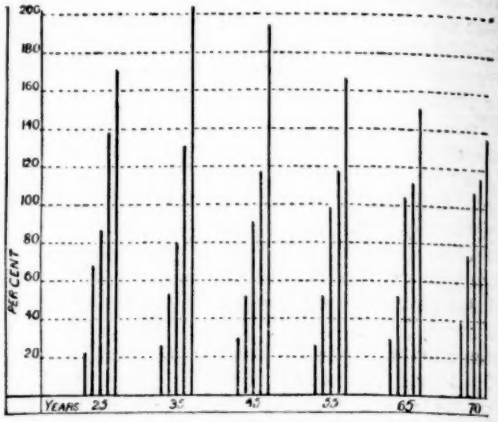

DIAGRAM II.—Social distribution of mortality due to bronchitis.

Another disease of an infective nature—namely, acute rheumatism or rheumatic fever—which leads to death from valvular disease of the heart, has mortality figures which are of the same order as those for phthisis and bronchitis, the difference being notably greater in the earlier years of life, as would be expected, for rheumatic fever is a disease especially affecting early life, although its main sequel—valvular disease of the heart—may not result in death for many years.

	Social Class				
	I	II	III	IV	V
Valvular disease of heart	36.1	57.2	61.1	67.3	80.9

While it would be unsound to regard these mortality rates alone as proof that diet plays a dominant part in the incidence of these infective diseases, yet when they are taken in association with (1) the animal experimental work showing the effect of diet on infection, and (2) the known dietetic habits of different social classes, they are suggestive of some such relationship. There are also other facts which support this view. For instance, it is generally agreed that the best treatment of phthisis is rest and diet, and that a diet which includes milk, eggs, green vegetables, and cod-liver oil—that is, a diet very rich in vitamin A—is the most effective. Then again, Bloch found that among 68 cases of vitamin A deficiency as indicated by xerophthalmia, there were 15 cases of pneumonia, 12 of bronchitis, 15 of otitis media, 27 of pyuria, 14 of pyodermia. Although, therefore, proof has not yet been forthcoming, it appears probable that phthisis, bronchitis, and possibly acute rheumatism—all diseases of a highly disabling nature with a high mortality rate—are in some way related to diet defect, and it is more than likely that this defect includes the ingestion of foods poor in vitamin A and other protective substances.

So far I have considered defective health in its relation to the deficient intake of specific food factors ; the other side of the problem must also receive consideration—namely, whether there is any evidence of diet producing ill-health following a surfeit of food or some food constituents. The result of eating too much cereal without sufficient vitamins to overcome the cereal effect has already been mentioned. There is no doubt, also, that the well-to-do eat much more food than people with less money, and there is a general consensus of opinion among medical men that this may result in disease, although, again, there is but little knowledge as to what foodstuffs produce a pathological condition. I do not propose to dwell on such a disability as obesity, which is obviously related to eating

too much food. There is, however, good reason to believe that diabetes, especially diabetes developing in later life, is related to overeating. The mortality rates given by the Registrar-General of diabetes among the different social classes support this view. These can be seen in Diagram III.

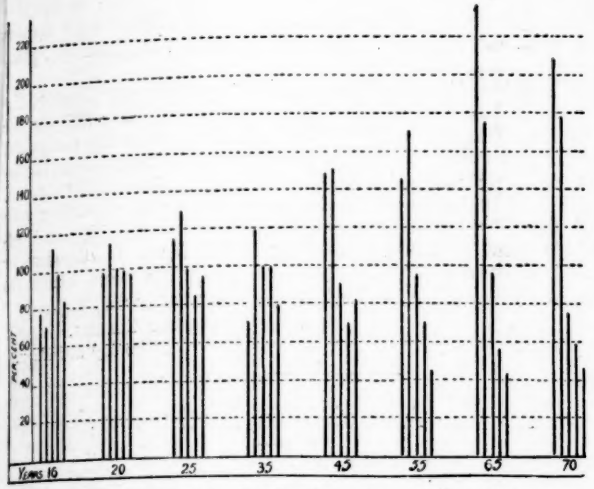

DIAGRAM III.—Social distribution of mortality due to diabetes.

The reduction of diabetes mellitus during the war, and its increase since that time, further indicate the relation of overfeeding, especially in adult life, to this condition. It is interesting to note that the increase is much greater among women, and it is said that the amount of diabetes among American women has become very large. Overfeeding, obesity, and diabetes mellitus seem to be closely related to one another in this respect.

Reference may be made to two other diseases which are probably related to over-indulgence—one of food and the other of liquid—namely, appendicitis and cirrhosis of the liver. In the following diagram, also taken from the Registrar-General's decennial report, the greater incidence of appendicitis among the well-to-do is clear—in fact, the difference at the ages of 45, 55, and 65 is most impressive.

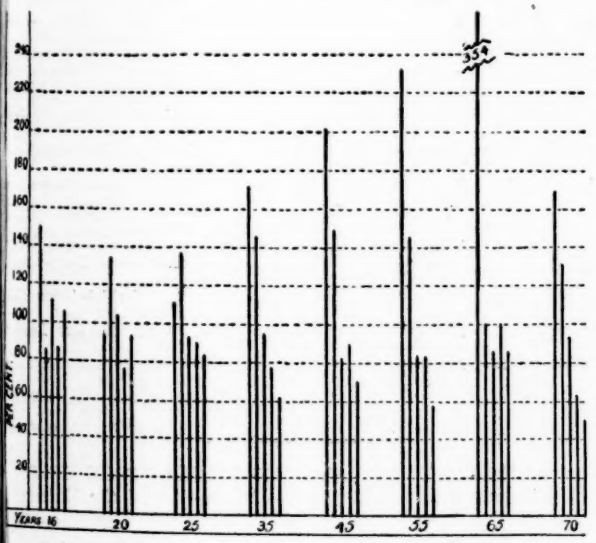

DIAGRAM IV.—Social distribution of mortality due to appendicitis.

Although we have some knowledge of the relation of alcohol to cirrhosis, we are ignorant as to the cause of appendicitis. It is interesting to know, however, that excessive eating may play at least some part in bringing about this latter condition.

CONCLUSION.

I have endeavoured in the foregoing account to give a bird's-eye view of some of the modern work and ideas concerning the relation of diet to health and disease. Some of this work shows conclusively, to my mind, that many of the more common diseases of man are due to dietetic defects, and that if these defects were remedied the diseases in question would be nearly, if not completely, eliminated. Rickets and defectively formed teeth can be cleared out of the country at once; pyorrhoea alveolaris can be very greatly reduced in the coming generation, and dental caries can not only be reduced, but can be cured by diet; adolescent simple goitre ought never to be seen if infant feeding is correct. If rickets were absent from the country, difficulties of childbirth would be reduced and maternal mortality lowered. While we are not on such firm ground as regards the anti-infective action of vitamin A, there is good reason to believe that a diet containing this vitamin and other protective factors in abundance during pregnancy and lactation would reduce maternal mortality by reducing sepsis and other accidents of pregnancy, and would lower infant mortality still further. It is also most likely that phthisis, bronchitis, and some other infective lesions, such as chronic otitis media, especially in children, would be greatly reduced as a result of more perfect feeding. Recent experiments, of which time has not allowed description, suggest that diet is also intimately concerned in a specific way with the development and functioning of the nervous system. It seems possible now to eliminate by correct feeding the nervous manifestations of such diseases as convulsive ergotism, pellagra, and lathyrism, and, if these diseases develop, to cure them by the addition of certain substances to the diet. Pellagra is very common in the Southern United States, and lathyrism in India. It is possible also that specific factors of diet may be related to some general nervous diseases in this country.

It is obvious that this is a rich harvest for the past twenty years, and it is by no means fully garnered yet.

What, then, is wrong with the English diet? In brief, it is wrong because (1) it contains too little protective dietetic factors such as are associated with green and other vegetables, milk, cheese, egg yolk, liver, and fat fish (herring, etc.), and (2) it contains too much cereal, such as bread, rice, oatmeal, maize, barley, etc. For economic reasons it is most unsuitable among the poor. Both from the point of view of the offspring and the mother it is not only essential that a perfect diet (in the sense described) should be given in pregnancy and lactation, but it is also important that throughout the period of growth—that is, for the first eighteen years—a chance of perfect development should be afforded to the tissues by good feeding.

Now that we have this knowledge, what are we going to do with it? Have we to wait for its benefits until it is gradually diffused from individual to individual, or have the information and the facilities for making use of it to be disseminated by the Government and other public bodies? What is the use of telling the poor to eat more green vegetables, butter, milk, and eggs? With all the good will in the world they cannot get them. Feeding with the proper ordinary foodstuffs will supply a sufficiency of all the protective factors except vitamin D, and for this substance supplies of such preparations as cod-liver oil or irradiated ergosterol must be obtained by some means for all young infants.

It is obvious that many problems of social economics and politics are involved in seeing that every member of the community, at least in early life, gets properly fed. Whatever the cost, the money will be saved a hundredfold, for by this means we have the best method of

prophylactic medicine yet devised. To take one example: the care of the teeth, as represented by present-day dentistry, costs the country millions of public money annually. Probably an expenditure of a few thousand pounds would provide yearly sufficient vitamin D to ensure the perfect formation of the teeth of every future member of the community if given from or before birth. Would that be a good investment?

However, it is not my province to discuss economic, social, and political problems. I can only point out the facts. It seems, however, suitable to conclude this lecture in the same words used by Sir Charles Hastings when, in a lecture on sanitary science in 1864, he not only advised everybody to carry out his teachings, but warned them of the effect on the public health if these were not acted up to. He concludes: "But whether England herself have the wisdom to walk in this way, and whether others follow or not therein, be assured that in the observance of these immutable principles the permanent prosperity of States is bound up. As the Scripture says, 'God is not mocked,' and His laws are not broken with impunity.

> The sword of Heaven is not in haste to strike
> Nor yet doth linger."

So, as regards this other great problem of public health—namely, the relation of diet to health—I re-echo these quaint words of Sir Charles Hastings.

British Medical Association

CURRENT NOTES

Inquiry into the Incidence of Cancer and its History after Treatment

The attention of readers is drawn to the annotation on this matter which appears at page 505 of the *Journal* this week. The returns which have been received in connexion with the inquiry do not provide sufficient material upon which to base any reliable conclusions, and it has therefore been decided to make a further appeal to practitioners to supply the Association with the necessary information. From answers received it seems probable that a good many practitioners thought that what was wanted was particulars of cases actually under treatment during the year October, 1929, to September, 1930. What was wanted, however, was particulars of patients who have been under treatment and who can still be traced. It is now proposed to make another attempt to obtain the desired information, and on this occasion practitioners are asked to review the records of those of their patients who have at any time suffered, or who are suffering now, from cancer of the breast, cervix, rectum, or tongue, and to let the Medical Secretary have the particulars on the appropriate form, which will be supplied immediately the requirements of each practitioner are known. It is hoped that practitioners will take a little trouble over this matter, and will review their clientele with the object of letting the Medical Secretary have a form in respect of every patient (even though now deceased) whose history is known, and who has been at any time or is at present under his care for any of the varieties of cancer mentioned.

Panel Committees and Medical Charities

The action of the Hertfordshire Panel Committee, as shown in the following letter recently received from the honorary secretary, will, it is hoped, commend itself to other Panel Committees with surplus funds at their disposal, and particularly those committees which have completed their quota to the National Insurance Defence Trust, or will be doing so in the near future.

SIR,—The expenses of the Hertfordshire Panel Committee are met by a voluntary levy, and of the 245 insurance practitioners upon the Hertfordshire Panel all but two or three subscribe under the scheme—an excellent record.

The Panel Committee has completed its full quota to the National Insurance Defence Trust, and at the last annual meeting the constituents were asked to decide if there should be a small reduction in the amount of the levy or whether it should remain unchanged and grants made from the surplus to medical charities. The latter was unanimously agreed upon.

Upon behalf of the Hertfordshire insurance practitioners, the Panel Committee now has pleasure in forwarding £50 for the B.M.A. Charities Trust Fund for allocation to the recognized medical charities in proportion to what is believed to be the needs of the respective institutions at the time of distribution.

The Panel Committee has also set aside a further sum of £150, which it is proposed should be available for hardships arising among Hertfordshire insurance practitioners or their dependants, and a subcommittee has been formed to draw up a suitable local scheme.—Yours faithfully,

SIDNEY CLARKE,
Honorary Secretary.

Association Notices

TABLE OF DATES

Mar. 28, Sat.	Nomination papers available (on application at Head Office) for election of (i) 24 members of Council by grouped Branches in the British Isles; and (ii) 2 Public Health Service members of Council and 4 Representatives of Public Health Service in Representative Body.
April 2, Sat.	Last day for receipt at Head Office of voting papers for election, where there are contests, of members of Council by oversea members.
April 25, Sat.	Publication in *Supplement* of Annual Report of Council.
May 2, Sat.	Last day for receipt at Head Office of nominations: (i) by a Division or not less than 3 members, for election of 24 members of Council by grouped Branches in the British Isles; and (ii) for election of 2 Public Health Service members of Council and 4 Representatives of Public Health Service in Representative Body.
May 12, Tues.	Motions by Divisions and Branches for A.R.M. agenda on matters of which 2 months' notice must be given must be received at Head Office by this date.
May 16, Sat.	Publication in *Supplement* of motions by Divisions and Branches for A.R.M. on matters of which 2 months' notice must be given. Representatives and Deputy Representatives must be elected by this date. Publication in *Supplement* of list of nominations for election of (i) 24 members of Council by grouped Branches in the British Isles; (ii) 2 Public Health Service members of Council, and 4 Representatives of Public Health Service in Representative Body. Voting papers posted from Head Office where there are contests in above elections.
May 23, Sat.	Last day for receipt at Head Office of voting papers for election, where there are contests, of (i) 24 members of Council by grouped Branches in the British Isles; and (ii) 2 Public Health Service members of Council and 4 Representatives of Public Health Service in Representative Body. Publication in *Supplement* of result of elections of members of Council by oversea members.
June 4, Thurs.	Names of Representatives and Deputy Representatives must be received at Head Office by this date.
June 6, Sat.	Publication in *Supplement* of result of election of members of Council by grouped Branches, and of result of election of members of Council and Representatives in Representative Body by Public Health Service members. Nomination papers available (on application at Head Office) for election of 12 members of Council by grouped Representatives (British Isles).
June 18, Thurs.	Meetings of constituencies must be held between this date and July 17th, to instruct Representatives.
June 27, Sat.	Publication in *Supplement* of Supplementary Report of Council.
July 1, Wed.	Amendments and riders for inclusion in A.R.M. agenda must be received at Head Office by this date.

ALFRED COX,
Medical Secretary.

BRANCH AND DIVISION MEETINGS TO BE HELD

BATH AND BRISTOL BRANCH.—A meeting of the Bath and Bristol Branch will be held in the Physiological Lecture Theatre of the University of Bristol on Wednesday, March 25th, at 8.30 p.m. Papers: Mr. H. J. Drew Smythe, Indications for induction of premature labour; Mr. Duncan Wood, Tetany following thyroid operations.

BORDER COUNTIES BRANCH.—A general meeting of the Border Counties Branch will be held at the Dumfries and Galloway Sanatorium, Lochmaben, on Tuesday, March 24th, at 3 p.m. Mr. Bruce M. Dick will give a lecture, with lantern demonstrations, on modern methods of diagnosis and surgical treatment of diseases of the thoracic viscera. Tea

KENT BRANCH.—A meeting of the Kent Branch will be held at King Edward VII Hospital, Dartford, on Wednesday, March 25th, at 3 p.m. Sir James Purves-Stewart, senior physician, Westminster Hospital, will give a lantern lecture on traumatic epilepsy. From 2.15 p.m. members will have the opportunity of viewing the work of this hospital of 230 beds with various clinics attached, entirely staffed by a part-time staff of private practitioners, general and special, and to which other practitioners not on the staff have free access to treat their own private, insured, and maternity patients. Tea provided after the lecture.

KENT BRANCH: ISLE OF THANET DIVISION.—A meeting of the Isle of Thanet Division will be held at the Kent and Canterbury General Hospital on Friday, March 27th, at 3.45 p.m. Lecture by Dr. George Riddoch on suggestions on the pathogenesis and treatment of headaches.

METROPOLITAN COUNTIES BRANCH: HARROW DIVISION.—The next meeting of the Harrow Division will be held in the Gayton Rooms on Tuesday, March 24th, at 8.30 p.m. Agenda: Paper by Mr. Alec Bourne on the "chronic pelvic woman"; consideration of proposal of Central Council that the Division adopt a resolution under its Ethical Rules in regard to the salaries of whole-time public health medical officers, and to the question of domiciliary attendance by whole-time medical officers.

METROPOLITAN COUNTIES BRANCH: WESTMINSTER AND HOLBORN DIVISION.—A dinner meeting of the Westminster and Holborn Division will be held at the Washington Hotel, Curzon Street, W.1, on Thursday, March 26th, at 7.45 p.m. At 9 p.m. Mr. Cecil Rowntree will read a paper entitled "Operative surgery of the aged." It is hoped that members who cannot be present at dinner will attend the meeting at 9. (Price of dinner 5s.; evening dress optional.) Members intending to be present at the dinner are asked to notify Dr. Cedric Hilliard, honorary secretary, before March 25th. Entries for the B.M.A. golf competition should be sent immediately to Dr. F. Howard Humphris, 4, Great Stanhope Street, W.1, with the entrance fee of half a crown.

MIDLAND BRANCH: DERBY DIVISION.—A general meeting of the Derby Division will be held in the Board Room of the Derbyshire Royal Infirmary on Tuesday, March 24th, at 8.15 p.m. Agenda: To appoint two representatives and deputies to the Annual Representative Meeting; to consider suggested alterations of the Midland Branch area, and, in conjunction therewith, resolutions of the Chesterfield and Buxton Divisions to constitute the county of Derby as a separate Branch; address by Dr. G. C. Anderson, Deputy Medical Secretary, on the hospital problem.

NORTH OF ENGLAND BRANCH: BLYTH DIVISION.—The annual dinner of the Blyth Division will be held on Thursday, April 16th, when Sir Robert Bolam will be the guest of honour.

NORTH OF ENGLAND BRANCH: GATESHEAD DIVISION.—A meeting of the Gateshead Division will be held at 9, Walker Terrace, Gateshead-on-Tyne, on Tuesday, March 31st, at 8 p.m. Agenda: (*a*) Maternity services; (*b*) pathological services; (*c*) salaries of whole-time public health medical officers and domiciliary attendance by whole-time medical officers; (*d*) discussion on the problem of the out-patient (see *Supplement*, February 21st); (*e*) election of representative and deputy representative.

NORTH OF ENGLAND BRANCH: NEWCASTLE-UPON-TYNE DIVISION.—A meeting of the Newcastle-upon-Tyne Division will be held at 7, Windsor Terrace, Newcastle-upon-Tyne, on Tuesday, March 31st, at 8.30 p.m. Agenda: Discussion on the report of Council on the problem of the out-patient; consideration of (*a*) proposal to adopt resolutions under Ethical Rules as to salaries of whole-time public health medical officers and domiciliary attendance by whole-time medical officers, (*b*) recission of resolution passed in respect of 1925 scale.

OXFORD AND READING BRANCH: OXFORD DIVISION.—The next meeting of the Oxford Division will be held at the Radcliffe Infirmary on Wednesday, March 25th, at 2.30 p.m. Mr. C. H. Fagge will give an address on the diagnosis of the acute abdomen.

SOUTH MIDLAND BRANCH: BUCKINGHAMSHIRE DIVISION.—A meeting of the Buckinghamshire Division will be held at the Royal Bucks Hospital, Aylesbury, on Friday, March 27th, at 3.30 p.m. Agenda: Consider adoption of binding resolution (*a*) agreed memorandum as to salaries of whole-time public health medical officers, and (*b*) whole-time medical officers and domiciliary work; appoint representative and deputy representative; address by Dr. Reginald Miller on the early diagnosis of rheumatism and heart disease in children.

SOUTH MIDLAND BRANCH: NORTHAMPTONSHIRE DIVISION.—A meeting of the Northamptonshire Division will be held at the General Hospital, Northampton, on Tuesday, March 24th, at 3 p.m. Sir Humphry Rolleston, Bt., Regius Professor of Physic, Cambridge, will give an address on the thyroid and parathyroids, with lantern illustrations. Tea and coffee after the meeting.

SOUTH WALES AND MONMOUTHSHIRE BRANCH: SWANSEA DIVISION.—A clinical meeting of the Swansea Division will be held on Thursday, March 26th.

SUFFOLK BRANCH: WEST SUFFOLK DIVISION.—A meeting of the West Suffolk Division will be held at the West Suffolk General Hospital, Bury St. Edmunds, on Tuesday, March 24th, at 3 p.m. Agenda: Correspondence; proposal to adopt, under Ethical Rules, resolutions in regard to (i) salaries of whole-time public health medical officers, and (ii) domiciliary attendance by whole-time medical officers; question of recission of resolution already passed (1925) in regard to scale of salaries; Report of Council on the problem of the out-patient.

SOUTH-WESTERN BRANCH: TORQUAY DIVISION.—A joint special meeting of the Torquay Division and the Torquay and District Medical Society will be held in the Torbay Hospital on Wednesday, March 25th, at 8.30 p.m. Coffee at 8 p.m. Dr. Ernest Ward will deliver an address on recent knowledge of tuberculosis, the transantlantic visit (illustrated by the epidiascope). All practitioners in the district are invited to be present.

SURREY BRANCH: CROYDON DIVISION.—A meeting of the Croydon Division will be held at the Croydon General Hospital on Tuesday, March 24th, at 8.30 p.m. Mr. W. R. Bristow will give an address.

SURREY BRANCH: REIGATE DIVISION.—A meeting of the Reigate Division will be held at the East Surrey Hospital on Tuesday, March 24th, at 8.45 p.m. Business: Election of representative and deputy representatives in the Representative Body; paper by Dr. A. S. Daly on recent advances in anaesthetics.

YORKSHIRE BRANCH: LEEDS DIVISION.—A meeting of the Leeds Division will be held in the Medical School, Leeds, on March 26th, at 3.30 p.m. Professor Edwin Bramwell will deliver a British Medical Association Lecture on some clinical experiences, with special reference to lead poisoning. All members of the medical profession in Leeds and in neighbouring Divisions will be welcome.

Meetings of Branches and Divisions

BIRMINGHAM BRANCH: NUNEATON AND TAMWORTH DIVISION

A meeting of the Nuneaton and Tamworth Division was held at Tamworth General Hospital on February 19th. Mr. W. E. BARNIE-ADSHEAD delivered an interesting and practical address on the treatment of some obstetrical and gynaecological conditions. Many members took part in the discussion which followed, and a hearty vote of thanks was accorded the lecturer for his most valuable address.

EDINBURGH BRANCH

The annual clinical meeting of the Edinburgh Branch was held in the Royal Infirmary on February 25th, when the president, Dr. KEPPIE PATERSON, presided over a good attendance of members and guests at the demonstration of cases by members of the Infirmary staff. There was an interesting and varied demonstration, and on the motion of the president a hearty vote of thanks was accorded to the medical superintendent and staff.

In the evening a dinner was held in the Scottish House, when the PRESIDENT was in the chair. The toast of "The British Medical Association" was proposed by Dr. PARLANE KINLOCH in a most interesting and inspiring speech, to which the PRESIDENT replied. Mrs. McNair Murray and friends provided the musical programme. In proposing the health of the president, Dr. COMRIE read a letter from Dr. Drever wishing the company a successful evening, and referring to the valuable work the president had done for the Association.

SURREY BRANCH: RICHMOND DIVISION

A meeting of the Richmond Division was held at the Royal Hospital on February 6th, with Dr. VAUGHAN PENDRED in the chair. Dr. H. W. BARBER read a paper on the diagnosis and treatment of some common skin diseases. The diseases taken were seborrhoea, acne, boils, intertrigo, and erysipelas. Dr. Barber discussed the organisms present in each, and his methods of treatment and his description of the conditions were new to most of the members present. The lecture was most interesting, and a discussion followed.

The SECRETARY read a report of the meeting of the Surrey Branch Council on January 14th.

A cordial vote of thanks to Dr. Barber for his address concluded the proceedings.

SUSSEX BRANCH: CHICHESTER AND WORTHING DIVISION

A meeting of the Chichester and Worthing Division was held in the Burlington Hotel on February 11th, When Dr. BOSTOCK was in the chair.

The SECRETARY submitted the annual report for 1930, which was approved. In response to a letter from the Worthing and South-West Sussex Branch of the College of Nursing, asking for suggestions for lectures for nurses, it was agreed to give help in the matter.

Dr. H. BURT-WHITE gave a lecture on the etiology, diagnosis, and treatment of puerperal sepsis. This was highly appreciated, both on account of its substance and the manner in which it was delivered. Drs. MCCURRICH, HECKFORD, and BOSTOCK voiced the Division's appreciation and thanks to the lecturer.

The members subsequently dined together in the hotel, under the presidency of Dr. BOSTOCK. After dinner the CHARITIES SECRETARY appealed on behalf of the B.M.A. Charities Fund. A whip-round resulted in the collection of sixteen guineas, with a promise of another five guineas. The toasting of the chairman's and the secretary's healths ended a most interesting and enjoyable evening.

THE DENTAL BOARD

A meeting of the Dental Board (in committee of the whole Board) was held on February 10th, under the chairmanship of the Right Honourable Sir FRANCIS DYKE ACLAND, Bt.

Post-Graduate Education.—Following upon a conference called by the Board to consider means whereby facilities for post-graduate instruction might be encouraged and developed, the Board agreed to arrange courses of such instruction to be held, in the first instance, in London, and then to be extended to provincial centres if considered expedient. Four extended courses are to be held, each to be completed in six weeks. Classes are to meet one afternoon a week for the study of local and regional anaesthesia, and one evening a week for the study of radiology. Two intensive courses are also to be arranged, each of a fortnight's duration. A class is to meet in the mornings for the study of children's dentistry, and a class in the afternoons for the study of the technique of orthodontics. The cost to the Board of conducting these courses of post-graduate instruction is to be limited to £150. Students will be required to pay an entrance fee of eight guineas for each of the extended courses; for the intensive course of children's dentistry the entrance fee will be five guineas, and for that on the technique of orthodontics ten guineas.

Suggested Amendments of the Dentists' Act.—A conference was recently held, summoned by the chairman of the Board, and attended by officers of the Ministry of Health, the Department of Health for Scotland, and the Ministry of Home Affairs for Northern Ireland, to consider the provisions of Section 5 of the Dentists' Act, 1921, with a view to amendment of the Section in the direction of imposing further limitations on the carrying on of the business of dentistry by bodies corporate. A letter was now reported to the Board in which it was stated that the Minister of Health had come to the conclusion, following this conference, that the only alteration which he would at present be disposed to view with favour would be one designed to prohibit a dentist who had been removed from the *Dentists Register* from acting as a director of, or taking any part in, the control of a dental company. With regard to certain other matters discussed at the conference, the Minister appreciated the arguments for increasing the representation of the dental profession on the Board, but felt that any such increase should be very closely limited. It should be governed by the consideration that the primary object was to render the services of a larger number of representatives of the profession readily available without undue expense for the transaction of business in London on behalf of the Board in the intervals between the Board's meetings. On another matter the Minister said that he would welcome the removal of misapprehensions which had arisen from the use of the expression "registered dentists not being qualified dentists" in the schedule of the Act, but this expression could be altered only by legislation, and the Minister was not in a position to undertake to promote legislation for the purpose, even on the assumption that it was practicable to amend the Act in this particular without becoming involved in a general discussion of other amendments. The Department of Health for Scotland concurred in the terms of the letter, and the Minister of Home Affairs for Northern Ireland had no comments to make.

Educational Grants.—The Board decided to increase from £1,000 to £3,000 the Board's grant to the Incorporated Glasgow Dental Hospital and School, provided that the hospital and school could collect by July 1st next the residue of not less than £1,700 necessary to complete the equipment.

Correspondence

UNNECESSARY REFERENCE TO REGIONAL MEDICAL OFFICERS

SIR,—From time to time statistics are published of insured patients referred by friendly societies for examination by regional medical officers. The fact that a large number of patients so examined are certified as fit for work is adduced by many as evidence of slack certification on the part of the patient's medical attendant. My experience may not be without interest.

On February 24th, one of my patients, a married woman, was taken ill at work. She was suffering from influenza, so I sent her home to bed and gave a first certificate of incapacity. By the first post on February 28th I received a communication from the regional medical officer saying that this patient had been referred by her society for examination.

A week later she was fit for work and given a final certificate. To-day she has been examined by the regional medical officer, who reports to her society that she is not incapable of work! I submit that such a proceeding is extravagant and wasteful of the time of all concerned, and a travesty of the principle for which reference of insured persons for further examination was established. It may be added that this patient has not been sick lately, and since the introduction of national health insurance has been incapacitated for a total period of three weeks.—I am, etc.,

Eastbourne, March 9th. D. G. CHURCHER.

National Insurance

WARWICKSHIRE PANEL AND LOCAL MEDICAL COMMITTEE

At a meeting of the Warwickshire Panel and Local Medical Committee, held at Leamington on February 26th, with Dr. H. MALINS in the chair, information was received from the Medical Secretary that the criteria, by which the eligibility of practitioners for inclusion in the British Medical Association's ophthalmic list is judged, coincide with those laid down in the first schedule of the Medical Benefit Regulations, in connexion with special services. If the applicant claimed to be qualified as being generally recognized by other local practitioners as having special proficiency and experience in ophthalmic work, it was usual to refer the matter to the Local Medical Committee.

Arising out of a consideration of this year's post-graduate scheme for the provision of facilities for doctors in isolated or sparsely populated areas, the committee resolved to write to all country doctors urging them to consider the desirability of their making application. At the same time, it was decided to point out to the Insurance Acts Committee that the current criteria were so stringent that last year all Warwickshire practitioners were ruled out, and that in the Panel Committee's opinion many doctors practising in suburban districts would benefit by a widened scheme, and that the position of many of them was comparable to that of practitioners in sparse or isolated areas.

The Chairman reported having attended a meeting of specialist practitioners at Leamington recently, when consideration was given to the provision of facilities for hydrotherapy and electrotherapy for the industrial and other population; also the question of compiling a list of consultants. The committee decided to ask the Leamington and Warwick Medical Society to allow the Local Medical Committee, as the only statutory committee for the area, to be associated with any further conference convened or action taken hereunder.

The British Medical Association's scheme for pathological services for dependants of the insured was welcomed, and steps taken to give publicity to local arrangements in co-operation with divisional secretaries.

A further discussion took place on the B.M.A. Scheme for a General Medical Service for the Nation, and it was arranged for copies of the scheme to be procured and circulated to the members.

Naval and Military Appointments

ROYAL ARMY MEDICAL CORPS

Lieutenant C. L. Day to be Captain.

ROYAL NAVAL MEDICAL SERVICE

Surgeon Commanders R. K. Shaw, M.C., to the *Vivid*, for R.N. Barracks, Devonport, March 9th, and to the *Vivid*, for Devonport Dockyard, March 30th; A. C. V. Green to the *Cyclops*; A. Craig to the *Vivid*, for R.N. Hospital, Plymouth.

Surgeon Lieutenant Commanders C. Keating to the *Bee*; R. W. Higgins to the *Pembroke*, for R.M. Infirmary, Deal; M. Barton to the *President*, additional, for three months' post-graduate course.

Surgeon Lieutenant C. N. H. Joynt to the *Emerald*.

ROYAL NAVAL VOLUNTEER RESERVE

Surgeon Lieutenant Commander W. F. W. Betenson to the *St. Vincent*.

Surgeon Lieutenants R. W. Buchanan to the *Victory*, for Haslar Hospital; J. D. J. Freeman to the *Victory* for R.N. Barracks.

Surgeon Lieutenant J. D. J. Freeman to the *Victory*, for R.N. Barracks.

To be Probationary Surgeon Sublieutenants: G. F. Jones and D. R. Hughes, attached to the Severn Division, List 2; B. R. Alderson, attached to the Tyne Division, List 2.

VACANCIES

ARGYLL COUNTY COUNCIL.—M.O. for the Medical Service of Kilmorich and Lochgoilhead.

ASHTON-UNDER-LYNE DISTRICT INFIRMARY.—H.S.

BACUP BOROUGH.—M.O.H., etc. (male).

BIRMINGHAM MATERNITY HOSPITAL.—(1) H.S. (2) R.M.O. and Registrar.

BRISTOL CITY AND COUNTY MENTAL HOSPITAL.—Third and Fourth A.M.O. (unmarried).

CAMBRIDGE: ADDENBROOKE'S HOSPITAL.—H.P. (male, unmarried).

CARDIFF: CITY LODGE INSTITUTION.—Second and Third A.M.O.

CHARING CROSS HOSPITAL, W.C.—Medical Registrar.

CHESTER ROYAL INFIRMARY.—(1) H.P. (2) H.S. to Ear, Nose, and Throat Department. Males.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE HEART AND LUNGS, Victoria Park, E.—H.P. (male).

DURHAM COUNTY COUNCIL.—M.O. of Earl's House Sanatorium for Boys.

EAST HAM MEMORIAL HOSPITAL, E.7.—Hon. Ophthalmic Surgeon.

ESSEX COUNTY COUNCIL.—Junior Assistant County M.O.H.

GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION.—First H.S. (male).

GREENWICH BOROUGH.—Woman M.O. for Infant Welfare Consultation.

HASTINGS: ROYAL EAST SUSSEX HOSPITAL.—Temporary R.H.S. (female).

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.1.—(1) H.S. (2) H.P.

HUDDERSFIELD ROYAL INFIRMARY.—Lady H.S.

HULL ROYAL INFIRMARY.—H.S. (male) to Ophthalmic and Ear, Nose, and Throat Departments.

IPSWICH: EAST SUFFOLK AND IPSWICH HOSPITAL.—Two H.S. (males).

KING EDWARD VII HOSPITAL, Windsor.—H.S. (woman).

LANCASTER: COUNTY MENTAL HOSPITAL.—A.M.O. (male).

LEICESTER ROYAL INFIRMARY.—(1) H.P. (2) Two Surgical Dressers.

LEICESTERSHIRE AND RUTLAND MENTAL HOSPITAL.—A.M.O. (unmarried).

LEWISHAM: ST. JOHN'S HOSPITAL.—(1) Hon. P. (2) Hon. S.

LIVERPOOL AND DISTRICT HOSPITAL FOR DISEASES OF THE HEART.—Research Fellow.

LIVERPOOL OPEN AIR HOSPITAL FOR CHILDREN, Leasowe.—J.R.M.O.

LIVERPOOL: ROYAL SOUTHERN HOSPITAL.—(1) Orthopaedic H.S. (2) M.O. to Special Departments.

LONDON LIGHT AND ELECTRICAL CLINIC, S.W.1.—Hon. Visiting P.

LOUGHBOROUGH AND DISTRICT GENERAL HOSPITAL.—R.H.S. (male, unmarried).

MANCHESTER ROYAL EYE HOSPITAL.—J.H.S.

MANCHESTER ROYAL INFIRMARY.—(1) Hon. Dermatologist. (2) Dickinson Research Travelling Scholarship in Medicine. (3) Dickinson Research Surgery Scholarship. (4) H.S. (lady) to Central Branch.

MANCHESTER UNIVERSITY.—(1) Pilkington Fellowship in Cancer Research. (2) Amy Henrietta Worswick Fellowship. (3) Knight Fellowship.

MANSFIELD AND DISTRICT HOSPITAL.—H.S. and C.O. (male).

MERTHYR TYDFIL HOSPITAL.—R.H.S.

MIDDLESBROUGH: NORTH RIDING INFIRMARY.—(1) Second H.S. (male). (2) Third H.S. (lady).

NEWARK GENERAL HOSPITAL.—Resident H.S. (unmarried).

NOTTINGHAM: GENERAL HOSPITAL.—(1) H.P. (2) C.O. (male).

NUNEATON GENERAL HOSPITAL.—H.S.

OLDHAM ROYAL INFIRMARY.—Three H.S. for (1) Women's and Children's Wards, (2) Male Wards, (3) In Charge of Out-patients and Special Departments.

PADDINGTON GREEN CHILDREN'S HOSPITAL, W.2.—(1) H.P. (2) H.S. Males, unmarried.

PETERBOROUGH AND DISTRICT MEMORIAL HOSPITAL.—R.H.S. (male).

PORTSMOUTH EDUCATION COMMITTEE.—Whole-time A.S.M.O. (male).

PORTSMOUTH: ROYAL PORTSMOUTH HOSPITAL.—(1) Third H.S. (2) C.O. Males.

PRESTON COUNTY BOROUGH.—J.R.M.O. at Sharoe Green Hospital, Fulwood.

PRINCE OF WALES'S GENERAL HOSPITAL, Tottenham.—(1) S.H.P. (2) S.H.S. (3) Special H.S. (4) J.H.P. (5) Two J.H.S.

RADIUM INSTITUTE, Riding House Street, W.—Resident Surgical Registrar (male, unmarried).

READING: ROYAL BERKSHIRE HOSPITAL.—(1) C.O. (2) Resident Anaesthetist. Males.

ROTHERHAM HOSPITAL.—(1) Hon. S. for Ear, Nose, and Throat Department. (2) Hon. Dental S. in Out-patient Department. (3) C.H.S. (male).

ROYAL AIR FORCE MEDICAL SERVICES.—M.O.'s.

ROYAL EYE HOSPITAL, St. George's Circus, S.E.1.—Hon. A.S.

ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN, S.E.1.—C.O.

ST. HELEN'S HOSPITAL.—H.S.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, Leicester Square, W.C.2.—Junior Hon. Medical Registrar.

ST. MARK'S HOSPITAL FOR CANCER, FISTULA, ETC., City Road, E.C.1.—H.S. (male).

ST. PETER'S HOSPITAL FOR STONE, ETC., Henrietta Street, W.C.—H.S. (male).

SCUNTHORPE AND DISTRICT WAR MEMORIAL HOSPITAL.—Second R.H.P. (male).

STAFFORDSHIRE GENERAL INFIRMARY.—H.P.

SURREY COUNTY COUNCIL.—A.R.M.O. at County Sanatorium, Milford.

SUTTON: THE NEW SUTTON AND CHEAM HOSPITAL.—Hon. Pathologist and Bacteriologist.

SWANSEA HOSPITAL.—H.S. (male, unmarried).

TUNBRIDGE WELLS AND COUNTIES GENERAL HOSPITAL.—H.S. (male).

TWICKENHAM BOROUGH.—A.M.O.

WALLASEY: VICTORIA CENTRAL HOSPITAL.—J.H.S. (male).

WALSALL GENERAL HOSPITAL.—H.S. (male).

WEST BROMWICH AND DISTRICT GENERAL HOSPITAL.—H.S. (male, unmarried).

WEST HARTLEPOOL: CAMERON HOSPITAL.—H.S.

WESTMINSTER HOSPITAL, S.W.1.—H.S. to Ear, Nose, and Throat and Eye Departments.

WEYMOUTH AND MELCOMBE REGIS BOROUGH.—M.O.H., etc.

MEDICAL REFEREE UNDER THE WORKMAN'S COMPENSATION ACT for the Sheriffdom of Stirling, Dumbarton, and Clackmannan. Applications to the Private Secretary, Scottish Office, Whitehall, S.W.1, by April 8th.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column advertisements must be received not later than the first post on Tuesday morning.

APPOINTMENTS

GREGORY, J. C., M.R.C.S., L.R.C.P., House-Surgeon to Surgical Unit, University College Hospital, London.

FRIZELLE, E. R., M.B., M.Ch.Belf., F.R.C.S.Ed., Honorary Assistant Surgeon to Southport Infirmary.

SAYLE, T. O., M.B., B.S.Melb., Resident Medical Officer to the Freemasons Hospital, Fulham Road, S.W.

MANCHESTER: BOOTH HALL HOSPITAL FOR CHILDREN.—*Resident Assistant Medical Officer:* Helen R. B. Buck, M.B., B.S.Lond. *Temporary Resident Assistant Medical Officer:* Margaret Crockett, M.B., Ch.B.Glas.

DIARY OF SOCIETIES AND LECTURES

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C.—Museum Demonstration: Mon., 5 p.m., Mr. Reginald T. Payne, Diseases of the Gall-bladder and Extrahepatic Biliary Passages.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, Pall Mall East, S.W.1.—Tues. and Thurs., 5 p.m., Lumleian Lectures by Sir William Willcox: Toxic Jaundice.

ROYAL SOCIETY OF MEDICINE

Section of Odontology.—Mon., 8 p.m., Demonstration, Dr. David Imrie: Radiographs for Prosthetic and Orthodontic Work. Cases.

Section of Medicine.—Tues., 5 p.m. Discussion, The Value of Liver in Treatment. To be opened by Dr. Janet Vaughan, Dr. S. C. Dyke, and Dr. J. F. Wilkinson.

Section of Urology.—Wed., 2.30 p.m., at St. Paul's Hospital, Endell Street, W.C. Professor von Lichtenberg will demonstrate an operation on the kidney.

Sections of Comparative Medicine and Epidemiology and State Medicine.—Wed., 5 p.m., Discussion, Milk-borne Streptococcus Epidemics. To be opened by Dr. G. W. Savage, Dr. F. C. Minett, and Mr. A. W. Stableforth, followed by Dr. E. Wilkinson, Mr. J. W. Brittlebank, and others.

Section of Urology.—Thurs., 5.30 p.m. Professor A. von Lichtenberg (Berlin): The Principles and New Advances in Excretion Urography.

Section of Disease in Children.—Fri., 5 p.m. Cases at 4.30 p.m.

Section of Epidemiology and State Medicine.—Fri., 8 p.m. Mr. A. F. MacCallan, Trachoma: its Importance as a World-wide Disease.

MEDICAL SOCIETY OF LONDON, 11, Chandos Street, W.1.—Mon., 8.30 p.m., Discussion: Growth in Children, Clinical, Radiological, and Histological. To be introduced by Dr. H. A. Harris, followed by Dr. H. H. Mills.

MEDICO-LEGAL SOCIETY, 11, Chandos Street, W.1.—Thurs., 8.30 p.m., Mr. F. L. Collins, F.I.A.: Mortality Tables, their History, Construction, and Use. Followed by a discussion.

NATIONAL ASSOCIATION FOR THE PREVENTION OF TUBERCULOSIS.—Lectures by Dr. Harley Williams: Wed., 7.30 p.m., Harmonic Hall, Irthlingborough; Thurs., 7.30 p.m., Corn Market Hall, Kettering.

ST. JOHN'S HOSPITAL DERMATOLOGICAL SOCIETY, 49, Leicester Square, W.C.2.—Wed., 4.15 p.m., Clinical Cases. 5 p.m., Dr. Dore: Infectivity and Auto-dissemination of certain Skin Diseases.

POST-GRADUATE COURSES AND LECTURES

FELLOWSHIP OF MEDICINE AND POST-GRADUATE MEDICAL ASSOCIATION, 1, Wimpole Street, W.1.—*King's College Hospital,* Denmark Hill, S.E.5: Wed., 3 p.m., Free Demonstration by Mr. V. E. Negus, Nose and Throat Cases. *St. John's Hospital,* Morden Hill, Lewisham, S.E.3: Thurs., 2.30 p.m., Free Demonstration by Dr. John Gibbens, Pulmonary Tuberculosis in Childhood, with Cases. *St. John's Hospital,* Leicester Square, W.C.2: Special Course in Dermatology, every afternoon and evening; tickets from Fellowship of Medicine. *Royal Waterloo Hospital,* Waterloo Road S.E.1: Special Course in Medicine, Surgery, and Gynaecology occupying mornings and evenings; tickets from Fellowship of Medicine. *West End Hospital for Nervous Diseases,* Welbeck Street, W.1: Lectures illustrated by Cases at 5 p.m. daily; tickets from Fellowship of Medicine.

CENTRAL LONDON THROAT, NOSE AND EAR HOSPITAL, Gray's Inn Road, W.C.1.—Fri., 4 p.m., Mr. A. Ryland, Oesophagoscopy.

CITY OF LONDON MATERNITY HOSPITAL, 102, City Road, E.C.1.—Thurs., 5 p.m., Mr. R. Christie Brown, The Significance of Albuminuria.

HAMPSTEAD GENERAL HOSPITAL, Haverstock Hill, N.W.3.—Wed., 4 p.m., Mr. Sidney Boyd, Clinical Demonstration.

LONDON SCHOOL OF DERMATOLOGY, St. John's Hospital, 49, Leicester Square, W.C.2.—Tues., 5 p.m., Dr. H. MacCormac, Malignant Growths of the Skin. Thurs., 5 p.m., Dr. W. N. Goldsmith, Benign Growths of the Skin.

NATIONAL HOSPITAL, Queen Square, W.C.1.—Daily (except Sat.), 2 p.m., Out-patient Clinics. Mon., 12 noon, Dr. Greenfield, Pathology of Cerebral Tumours; 3.30 p.m., Mr. Leslie Paton, Vestibular Control of Ocular Movements. Tues., 3.30 p.m., Dr. Grainger Stewart, Visual Disturbances in Nervous Diseases. Thurs., 3.30 p.m., Dr. Gordon Holmes, Cerebral Tumours. Fri., 3.30 p.m., Dr. Carmichael, Nervous Symptoms, associated with Blood Diseases.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—Mon., 2.30 to 5 p.m., Medical, Surgical, and Gynaecological Clinics, Operations. Tues., 2.30 to 5 p.m., Medical, Surgical, and Throat Clinics, Operations. Wed., 2.30 to 5 p.m., Medical, Skin, and Eye Clinics, Operations. Thurs., 11.30 a.m., Medical, Surgical, Throat, and Children's Clinics, Operations. Fri., 10.30 a.m., Throat Clinics; 2.30 to 5 p.m., Medical and Surgical Clinics, Operations.

WEST LONDON POST-GRADUATE COLLEGE, Hammersmith Road, W.1.—Mon., 10 a.m., Gynaecological Ward, Genito-Urinary Operations, Skin Department; 11 a.m., Surgical Ward Visit; 2 p.m., Surgical Ward Visits, Operations, Medical, Surgical, Eye, and Gynaecological Out-patients. Tues., 9.30 a.m., Operations; 10 a.m., Medical Ward Visit, Dental Department; 11 a.m., Throat Operations; 11.30 a.m., Surgical Demonstration; 2 p.m., Operations, Medical, Surgical, and Throat Out-patients. Wed., 10 a.m., Medical Ward Visit, Children's Medical Out-patients; 2 p.m., Operations, Medical, Surgical, and Eye Out-patients; 4.45 p.m., Venereal Diseases Demonstration. Thurs., 10 a.m., Neurological Department; 11.30 a.m., Fracture Demonstration; 2 p.m., Medical, Surgical, Genito-Urinary, and Eye Out-patients; 2.30 p.m., Operations. Fri., 10 a.m., Medical Ward Visit, Dental Department, Skin Department; 12 noon, Medical Lecture; 2 p.m., Operations, Medical, Surgical, and Throat Out-patients. Sat., 9 a.m., Throat Operations; 10 a.m., Medical Ward Visit, Children's Medical Out-patients, Surgical Out-patients.

GLASGOW POST-GRADUATE MEDICAL ASSOCIATION.—At Ophthalmic Institution: Wed., 4.15 p.m., Dr. T. Stewart Barrie, Eye Cases.

LIVERPOOL UNIVERSITY CLINICAL SCHOOL ANTE-NATAL CLINICS.—Royal Infirmary: Mon. and Thurs., 10.30 a.m. Maternity Hospital: Mon., Tues., Wed., Thurs., and Fri., 11.30 a.m.

MANCHESTER: ANCOATS HOSPITAL.—Thurs., 11 a.m., Dr. N. Kletz, Clinical Demonstration; 4.15 p.m., Mr. H. Platt, Treatment of Fractures of the Upper Limb.

MANCHESTER ROYAL INFIRMARY.—Tues., 4.15 p.m., Dr. D. Dougal, Endometrioma. Fri., 4.15 p.m., Dr. C. H. Melland, Demonstration of Medical Cases.

MANCHESTER VICTORIA MEMORIAL JEWISH HOSPITAL, Elizabeth Street.—Wed., 4.30 p.m., Dr. S. Kelly, Headaches.

SHEFFIELD UNIVERSITY POST-GRADUATE CLINICS.—At Royal Hospital: Fri., 3.30 p.m., Mr. H. B. Yates, Surgical Treatment of Vascular Disease, including Injection of Varicose Veins.

British Medical Association

OFFICES, BRITISH MEDICAL ASSOCIATION HOUSE TAVISTOCK SQUARE, W.C.1

Departments

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SCOTTISH MEDICAL SECRETARY: 7, Drumsheugh Gardens, Edinburgh. (Telegrams: Associate, Edinburgh. Tel.: 2430 Edinburgh.)

IRISH MEDICAL SECRETARY: 16, South Frederick Street, Dublin. (Telegrams: Bacillus, Dublin. Tel.: 4737 Dublin.)

Diary of the Association

MARCH

20 Fri. London: Ophthalmic Committee, 2.30 p.m.
Hendon Division: Hendon Cottage Hospital, 8.30 p.m. Clinical Meeting.

24 Tues. London: Mental Deficiency Committee, 2.30 p.m.
Border Counties Branch: Dumfries and Galloway Sanatorium, Lochmaben, 3 p.m. Lecture by Dr. Bruce M. Dick.
Croydon Division: Croydon General Hospital, 8.30 p.m. Address by Mr. W. R. Bristow.
Derby Division: Board Room, Derbyshire Royal Infirmary, 3.15 p.m. Address by Dr. G. C. Anderson.
Harrow Division: Gayton Rooms, 8.30 p.m. Paper by Mr. Alec Bourne.
Northamptonshire Division: General Hospital, Northampton, 3 p.m. Address by Sir Humphry Rolleston.
Reigate Division: East Surrey Hospital, Redhill, 8.15 p.m. Paper by Dr. A. S. Daly.
West Suffolk Division: West Suffolk General Hospital, Bury St. Edmunds, 3 p.m.

25 Wed. London: Naval and Military Committee, 2.30 p.m.
Bath and Bristol Branch: Physiological Lecture Theatre, University of Bristol, 8.30 p.m. Papers.
Kent Branch: King Edward VII Hospital, Dartford, 3 p.m. Lecture by Sir James Purves-Stewart.
Oxford Division: Radcliffe Infirmary, 2.30 p.m. Address by Mr. C. H. Fagge.
Torquay Division: Torbay Hospital, 8.30 p.m. Address by Dr. Ernest Ward.

26 Thurs. Leeds Division: Medical School, Leeds, 3.30 p.m. B.M.A. Lecture by Prof. Edwin Bramwell.
Swansea Division. Clinical Meeting.
Tyneside Division: Address by Dr. Stanley White.
Westminster and Holborn Division: Washington Hotel, Curzon Street, W.1, 7.45 p.m. Dinner Meeting. Paper by Mr. Cecil Rowntree at 9 p.m.

27 Fri. London: Central Ethical Committee, 2.15 p.m.
Buckinghamshire Division: Royal Bucks Hospital, Aylesbury, 3.30 p.m. Address by Dr. Reginald Miller.
Isle of Thanet Division: Kent and Canterbury General Hospital, 3.45 p.m. Lecture by Dr. George Riddoch.

31 Tues. Gateshead Division: 9, Walker Terrace, Gateshead-on-Tyne, 8 p.m.
Newcastle-upon-Tyne Division: 7, Windsor Terrace, Newcastle-upon-Tyne, 8.30 p.m.

APRIL

1 Wed. London: Finance Committee, 2.30 p.m.

8 Wed. London: **Council,** 10 a.m.

16 Thurs. Blyth Division. Annual Dinner. Guest of Honour, Sir Robert Bolam.

29 Wed. Surrey Branch: Walton Heath. Golf Competition for President's Prize.

MAY

14 Thurs. London: Journal Committee, 2.30 p.m.

BIRTHS, MARRIAGES, AND DEATHS

The charge for inserting announcement of Births, Marriages, and Deaths is 9s., which sum should be forwarded with the notice not later than the first post on Tuesday morning, in order to ensure insertion in the current issue.

DEATHS

PERIGAL.—On March 7th, 1931, at West Southbourne, Harpenden, Arthur Perigal, M.D., M.R.C.S., aged 82 years, of New Barns, Herts, eldest son of the late Arthur Perigal, R.S.A.

POWELL.—On Monday, March 16th, 1931, at 10, Buckleigh Road, Streatham, Henry Albert Powell, M.A.Oxon., M.R.C.S., etc. No flowers.

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